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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/566,307	01/27/2006	Dean Kamen	1062/E19	4217
2101 7590 04/18/2007 BROMBERG & SUNSTEIN LLP 125 SUMMER STREET BOSTON, MA 02110-1618			EXAMINER LAUGHLIN, NATHAN L	
			ART UNIT 2125	PAPER NUMBER

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS.	04/18/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/566,307	KAMEN ET AL.	
	Examiner	Art Unit	
	Nate Laughlin	2125	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 February 2007.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>2-24-07</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claim 7 is objected to because of the following informalities: Applicant uses the term 'turbidity', Examiner believes Applicant means turbidity, and the applicant is examined as such. Appropriate correction is required.

Claim 6 is objected to because of the following informalities: Claim 6 depends back to itself. Examiner has examined the claim as though it depends back to claim 1. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 3 and 4 recites the limitation "the at least one sensor" in claim 1.

There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or

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(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-2, 11-13, and 21-23 are rejected under 35 U.S.C. 102(e) as being anticipated by Gardener (U.S. PG Pub. 2002/0024332)

As to claim 1, Gardener teaches a system comprising: a generation device for converting an available resource to a desired utility (fig. 1 element 11), the generation device characterized by a plurality of operating parameters [0007]; b. an input sensor for measuring input to the generation device [0014]; c. an output sensor for measuring consumption of output from the generation device [0014]; d. a controller for concatenating measured input and consumption of output on the basis of the input and output sensors[0008].

As to claim 2, Gardener teaches a sensor for measuring at least one parameter of the said plurality of operating parameters of the generation device (fig. 6b).

As to claim 11, Gardener teaches the generation device is an electrical power generator (fig. 11).

As to claim 12, Gardener teaches an input sensor includes a fuel consumption rate monitor [0014].

As to claim 13, Gardener teaches an output sensor includes an electrical usage meter monitor [0014].

As to claim 17, Gardener teaches a remote actuator for varying operating parameters of the generator based on remotely received instructions [0048].

As to claim 21, Gardener teaches a system comprising: providing a generation device (fig. 1 element 11); coupling an input sensor for measuring input to the generation device [0014]; coupling an output sensor for measuring consumption of output from the generation device [0014]; and coupling a controller to the input and output sensor for concatenating measured input and consumption of output on the basis of the input and output sensors [0008].

As to claim 22, Gardener teaches providing communication between a telemetry module and said controller (fig. 1a); and providing communication between said telemetry module and a monitoring station (fig. 1a).

As to claim 23, Gardener teaches a distributed network of utilities comprising: generators for converting a resource into a useful utility (fig. element 11); input sensors for measuring inputs to respective generators [0014]; output sensor for measuring consumption of output from respective generators [0014]; a telemetry transmitter for transmitting input and output parameters of a specified

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generator (fig. 1a); and a remote processor for receiving input and output parameters from a plurality of utility generators (fig. 1a, elements 30, 20).

6. Claims 1, 5-7, 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Singhvi et al (U.S. Pat. 6,408,227).

As to claim 1, Singhvi teaches a system comprising: a generation device for converting an available resource to a desired utility (fig. 1 element 166), the generation device characterized by a plurality of operating parameters (Table 1, col. 9); b. an input sensor for measuring input to the generation device (Table 1, col. 9); c. an output sensor for measuring consumption of output from the generation device (fig. 2 element 250); a controller for concatenating measured input and consumption of output on the basis of the input and output sensors (fig. 2 element 260, Table 1, col. 9). Singhvi teaches using water related inputs and outputs from the purification process to control the system.

As to claim 5, Singhvi teaches generation device is a water purifier (fig. 2).

As to claim 6, Singhvi teaches wherein the input sensor is a flowrate monitor (Table 1, col. 9).

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As to claim 7, Singhvi teaches wherein the output sensor includes a water quality sensor including at least one of a turbidity, conductivity, and temperature sensor (Table 1, col. 9).

As to claim 9, Singhvi teaches an alarm that alerts a user when said water quality value rises above a pre-programmed water quality value (col. 6 lines 28-35).

7. Claim 24 is rejected under 35 U.S.C. 102(e) as being anticipated by Aldridge (U.S. PG PUB 20050154499).

As to claim 24, Aldridge teaches a method comprising: providing a generator to a user; monitoring at least one index of generator usage to supply a utility; and charging the user on the basis of the index of generator usage [0011, 0036]. Aldridge teaches providing a generator to a user and monitoring the usage so that an accurate charge can be given to each consumer.

### ***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which

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said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Singhvi (U.S. Pat. 6,408,227) in view of Wolfe (U.S. Pat. 6,954,701).

Singhvi teaches a water treatment system where inputs and outputs from sensor data are used within the system for controlling purposes. Singhvi does not teach a telemetry module that communicates to a remote site. However, Wolfe teaches the limitations as follows:

As to claim 14, Wolfe teaches a monitoring system comprising a telemetry module for communicating measured input and output parameters to a remote site (fig. 1).

As to claim 15, Wolfe teaches the telemetry module is a cellular communications system (col. 5 lines 10-34).

As to claim 16, Wolfe teaches a telemetry module is a wireless system (col. 5 lines 10-34).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the telemetry module of Wolfe in the monitoring system of Singhvi, the motivation to combine is a real time analysis by



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highly trained personnel that may not be at the treatment site can occur when the data is sent to remote locations (col. 2 lines 25-30).

10. Claims 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Singhvi (U.S. Pat. 6,408,227) in view of Tucker (U.S. Pat. 6,568,416).

Singhvi teaches a generating system that is monitored and controlled using input and output sensors. Singhvi does not explicitly teach using a GPS as a self-locating device. However, Tucker shows a generating device that uses a GPS to modify operating conditions.

As to claim 18, Tucker teaches a self-locating device having an output indicative of the location of the monitoring system (col. 12 lines 47-66).

As to claim 19, Tucker teaches the self-locating device is a global positioning system (col. 12 lines 47-66).

As to claim 20, Tucker teaches monitored characteristics of input and output depend upon the location of the monitoring system (col. 12 lines 47-66).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included a GPS component as done in Tucker into the monitoring system of Singhvi. The motivation to combine is

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using GPS systems can increase precision and reduce errors (col. 1 line 63- col. 2 line 10).

11. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Singhvi (U.S. Pat. 6,408,227) in view of Underwood (U.S. PG Pub. 2003/0220717).

Singhvi teaches a generating system that is monitored and controlled using input and output sensors. Singhvi does not explicitly disclose monitoring flow impedance. However Underwood teaches a system that monitors flow impedance.

As to claim 4, Underwood teaches a monitoring system according to claim 1, wherein the at least one sensor is a flow impedance monitor [0035]. Underwood teaches the difference in pressure (flow impedance) through components in a water treatment facility.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was created to include the flow impedance monitor into the monitoring system of Singhvi. The motivation to combine is using the a flow impedance monitor obtained certain levels, then equipment can be consider faulty, and may need replacement [0036].

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12. Claim 3 and 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Singhvi (U.S. Pat. 6,408,227) in view of Dosani (U.S. Pat. 5,808,277).

Singhvi teaches a generating system that is monitored and controlled using input and output sensors. Singhvi does not explicitly teach shutting off the generating device when a threshold is reached, or a heat transfer monitor. However, Dosani teaches these limitations as follows:

As to claim 3, Dosani teaches a sensor is a heat transfer monitor (col. 1 line 33-61).

As to claim 8, Dosani teaches a shut off switch that automatically turns off said generation device when said water quality sensor rises above a pre-programmed water quality value (abstract). Dosani teaches transferring of heat to raise the level of water to clean contaminates from the water, and when a certain temperature is reached, shutting down off the heating unit.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was created to include Dosani sensors into the monitoring system of Singhvi. The motivation to combine is using a thermostat to test the temperature of water, a heating unit can be controlled to ensure that no bacteria is in the water and ensure water quality (col. 3 lines 33-44, col. 1 line 33-61).

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13. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Singhvi (U.S. Pat. 6,408,227) in view of Kutzik (U.S. Pat. 6,108,685)

Singhvi teaches a generating system that is monitored and controlled using input and output sensors. Singhvi does not explicitly teach a remote shut off switch. However, Kutzik teaches remotely operable shut off switch.

As to claim 10, a remotely operable shut off switch (col. 12 lines 9- 31).

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to include Kutzik remote operable switch in to the monitoring system of Singhvi. The motivation to combine is having remotely operable shut off switch can stop equipment if the monitoring system deems it unfit to function and can even avoid emergencies (col. 2 lines 5 –29).

### ***Conclusion***

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Lynch et al (U.S. Pat. 4,830,757 teaches a telemetry system for water and energy monitoring. Perry Jr. et al (U.S. Pat. 4,776,171) teaches a water purification system along with an energy management system.

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*Inquiry*

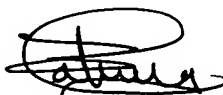
15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nate Laughlin whose telephone number is 571-270-1042. The examiner can normally be reached on Monday - Friday 8am-5pm with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard can be reached on 571-272-3749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nate Laughlin

10-13-07



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